

Optimized calibration data based methods for parallel digital feedback, and digital automation controls

Abstract

A method of building multiple input multiple output (MIMO) digital control for piecewise single way linearizable plant with hysteresis, a method of system identification that achieves predetermined accuracy across complete spectrum of response model and discovers multiple steady states of a MIMO plant, a method of real-time implementation of various optimal control inputs for a MIMO plant suitable for complete operational envelope of said plant across plurality of steady states, an algorithm and apparatus of multithreading control said MIMO plant that implements methods of the invention and satisfies requirements of high-speed control applications.